CHUYKO, V. T.

180T74

USSR/Metals - Analysis, Zinc Nov 50

"Accelerate Method for Determination of the Small Quantities of Copper in Zinc," V. T. Chuyko, A. Ya. Shchelkanovtseva, Donets Industrial Inst

"Zavod Lab" No 11, pp 1309-1312

Method is based on partial pptn of zinc with alkali hydroxide with successive detn of concd copper with diethyldithiocarbamate of sodium in alk medium. Under these conditions, coloration of copper carbamate is more stable than in the weakly-alk, neutral

180T74

USSR/Metals - Analysis, Zinc (Contd) Nov 50

or acid media and may be more easily measured colorimetrically than in soln of carbon tetrachloride. Lowest copper concn, which may be detd by this method, is 0.0004%.

180T74

CA

Rapid determination of small quantities of copper in zinc. V. T. Chuiko and A. Ya. Shchelkanovtseva (Donets Ind. Inst.). *Zavodskaya Lab.* **16**, 1309–12(1950).—As little as 0.0001% Cu in Zn can be detd. by the Na carbamate method after suitable concn. in alk. soln. The concn. is best done by addn. of 2 *N* NaOH and centrifuging the ppt. which is then taken up in 50% citric acid and analyzed colorimetrically. G. M. Kosolapoff

USSR/Chemistry - Analysis, Nickel Sep/Oct 51

"Concentration Methods for Determination of Traces of Nickel. III. Determination of Nickel in a Mixture of Cations of the Third Analytical Group," V. T. Chuyko, Donets Ind Inst, Stalino

"Zhur Analit Khim" Vol VI, No 5, pp 297-299

To detn traces of metal in complex mixt from which inhibiting substances must be sepd, concn process can be worked out based on repeated reppin of subject metal with different collectors, or on combination of this method

189T12

USSR/Chemistry - Analysis, Nickel Sep/Oct 51
(Contd)

With partial pptn of collector if partial pptn with given collector-microcomponent pair leads to quant concn. Proposes procedure for concn of Ni from mixt of Al, Cr, Fe, Mn, Co, Zn ions.

189T12

CHUYKO, V.T.; LOTAREVA, V.I.

Concentration procedure in determining traces of copper in iron salts. Ukrain. Khim. Zhur. 16, 612-15 '51. (MLRA 6:4)
(CA 47 no.21:11071 '53)

1. Don Ind. Inst.

Chuyko, V. T.

USSR/Physical Chemistry - Thermodynamics. Thermochemistry. Equilibrium. Physico-chemical Analysis. Phase Transitions, B-8

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 357

Author: Chuyko, V. T.

Institution: Cherkas'k State Pedagogical Institute

Title: On the Applicability of Khlopin's Law to the Distribution in Systems with Close Component Ratios

Original Periodical: Nauk. zap. Cherkas'k. derzh ped. in-tu, 1954, No 6, 55-58 (published in Ukrainian)

Abstract: It is shown that the Kolthoff equation (H. C. Jutzy and I. M. Kolthoff, J. Amer. Chem. Soc., 1937, 59, 916), which gives the distribution of 2 electrolytes between the solution and the residue at equal concentrations of the components, is identical with an equation which had been deduced earlier (Ratner, Tr. Gos. radievogo in-ta, 1937, Vol 3) and which gives a theoretical formulation of Khlopin's law. In the opinion of the author, it may be considered as established that

Card 1/2

USSR/Physical Chemistry - Thermodynamics. Thermochemistry. Equilibrium. Physico-chemical Analysis. Phase Transitions, B-8.

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 357

Abstract: Khlopin's law is applicable over a wide range of component ratios. Ratner's equation gives a more exact description of the distribution of the 2 electrolytes than Kolthoff's equation.

Card 2/2

Distribution of small quantities of bismuth between the solution of copper nitrate and the precipitate obtained with basic salts. V. T. Chuĭko and T. B. Gol'tsman (N. S. Khrushchev Don Ind. Inst.). *Ukrain. Khim. Zhur.* 20, 83–6(1954)(in Russian).—The distribution of Bi was studied by varying the concn. of Bi (0.02–5 mg. in 10 ml.), time of contact (5–30 min.), concn. of Cu (0.1–0.0125 g./ml.), and dilu. (0.05 mg. Bi in 15–100 ml. of soln.). The reversibility of the process was also studied. Partial pptn. of Cu was done with Na_2CO_3 or NaOH. At 5 mg. of Bi in 10 ml. of soln. all of it went into the ppt. At 0.02–0.25 mg./10 ml. the distribution of Bi between soln. and ppt. was practically const. Time of contact (shaking) had no significant effect beyond 5 min. The process was reversible. This was established by shaking a Cu ppt. contg. Bi with a $CuNO_3$ soln. free of Bi. Dilu. of the original soln. (10 ml. contg. 0.05 mg. Bi) from 15 to 100 ml. caused more Bi to concentrate in the ppt. Reducing the amt. of Cu in soln. had a similar effect. It is concluded that adsorption of Bi by basic Cu salt is essentially an exchange reaction.

M. Hoseh

CHUYKO, V.T.; CHUYKO, K.G. [Chuyko, K.H.]

Using the semimicromethod in studying qualitative analysis at the Teachers' Institute. Nauk. zap. ChDPI 8:11-14 '56. (MIRA 11:2)
(Microchemistry)
(Cherkassy--Teachers, Training of)

MAM?NKO, A.U.; CHUYKO, V.T.

Coprecipitation of copper traces with the 8-hydroxyquinolinates of some metals. Nauk. zap. ChDPI 8:109-112 '56. (MIRA 11:2)
(Copper) (Quinolinic acid) (Chemistry, Analytic--Quantitative)

CHUYKO, V.T. CHUYKO, V.T.

2

1129. Method of concentration of traces of copper by means of organic reagents. V. T. Chuiko and A. U. Marsenko (Cherkinsk Pedagogical Inst.). *Zhur. Anal. Khim.*, 1950, 11 (3), 332–336.—When traces of Cu in a solution of $Pb(NO_3)_2$ are collected by co-pptn. with part of the Pb pptd. with 8-hydroxyquinoline, the proportion of Cu in the ppt. in relation to the total Cu becomes less as the total amount of Cu is progressively reduced below a certain limit. Thus the ppt. obtained from 8 ml of 0·1 *M* $Pb(NO_3)_2$, 1 ml of 2 *M* Na acetate and 0·5 ml of 0·15 *M* 8-hydroxyquinoline contains 97 to 98% of the Cu when 80 μg is initially present, and only 24 to 34% when 5 to 10 μg is initially present. Complete extraction of the Cu can be attained in such cases when the 8-hydroxyquinoline complexes are extracted with $CHCl_3$, followed by treatment of the extract with HNO_3 and extraction of Cu from the acid extract with dithizone. Copper can be extracted satisfactorily from salts of Cd and Pb by extraction of the diethyldithiocarbamate with $CHCl_3$. This method applied to salts of Ni and Co is subject to errors—Cu is incompletely extracted and some of the Ni or Co appears in the $CHCl_3$ layer. Standards can be used to compensate for the errors.

G. S. Smith

Chuyko, V. T.

78-3-29/35

AUTHOR: Chuyko, V. T.

TITLE: Methods of Concentrating Traces of Metals by Entrainment in a Precipitate. I. Concentration by Co-Precipitation. (Sposoby kontsentrirovaniya sledov metallov uvlecheniyem v osadok. I. Kontsentrirovaniye soosazhdeniyem)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1957, Vol.II, Nr.3, pp. 685-695. (USSR)

ABSTRACT: Conditions have been found which secure over 90% co-precipitation of traces of metals forming slightly soluble hydroxides with the hydroxides of other metals during concentration by precipitation of the collector-substance by excess reagent and by partial precipitation of the macro-component as hydroxide. For the first method of concentration this requires a pH value for the solution greater than that for the precipitation of the hydroxide of the metal being co-precipitated; the attainment of the solubility product of its hydroxide is not then of primary importance. Nor is the relatively complete co-precipitation affected by the

Card 1/2

Methods of Concentrating Traces of Metals by Entrainment in a Precipitate. I.

presence of other electrolytes, differences in properties of the hydroxides of the metal being concentrated and of the collector, temperature, the duration of ageing the precipitate after co-precipitation or the order in which the reagents are added. For concentration by the second method a definite, empirical ratio between the macro- and micro-component concentrations must be attained; otherwise the micro-component distributes itself between the solution and the precipitate in the normal way. There are 10 tables and 16 references, of which 13 are Slavic.

ASSOCIATION: Cherkassy Pedagogical Institute. (Cherkasskiy Pedagogicheskiy Institut.)

SUBMITTED: June 25, 1956.

AVAILABLE: Library of Congress.

Card 2/2

CHUYKO, V.T.

CHUYKO, V.T.

Distribution of an electrolyte admixture between the salt solution and crystals of the other electrolyte. Zhur.neorg.khim. 2 no.9:2264-2269 S '57. (MIRA 10:12)

1.Cherkasskiy pedagogicheskiy institut.
(Electrolytes)

SOV/137-58-11-23815

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 277 (USSR)

AUTHOR: Chuyko [Chuyko, V. T.]

TITLE: On the Problem of Coprecipitation With Metallic Hydroxides of Metallic Impurities Which Form Dissolution-resistant Hydroxides (K voprosu soosazhdeniya s gidrookisyami metallov primesey metallov, obrazuyushchikh trudnorastvorimyye gidrookisi)

PERIODICAL: Nauk. zap. Cherkas'k derzh. ped. in-t, 1957, Vol 11, pp 335-343; in Ukrainian

ABSTRACT: An examination was made of the phenomenon of coprecipitation (C) of Cu (Ni) with basic salts (hydroxides) of Fe and Al from dilute solutions and also of adsorption (A) of Cu (Ag) on MnO_2. C was performed from bicarbonate solutions while Cu was precipitated from acetate solutions under conditions in which 30 - 70% of the metal would be included in the precipitate. The author notes that extraneous electrolytes have little effect on Cu, whereas an increase of the buffer mixture brings about a decrease of C. It is assumed that Cu (Ni) is absorbed by the precipitate during C in the form of hydrolysis products and, therefore, factors that regulate the hydrolysis should also regulate

Card 1/2

On the Problem of Coprecipitation With Metallic Hydroxides of Metallic (cont.)

the C process. It is shown that the A of Cu and Ni salts on $Fe(OH)_3$ has a hydrolytic character and that the C of Cu (Ni) increases with the decrease of the stability of the compound binding them in the solution. If $Fe(OH)_3$ contains an adsorbed or a coprecipitated electrolyte, the absorption of another electrolyte from the solution can occur by means of ion exchange. Upon a decrease in the strength of the solution the A of Cu by the MNO_2 precipitate increases, whereas the A of Ag remains unchanged. It is concluded that the distribution of Cu(Ni) admixtures between the solution and the precipitate of $Fe(OH)_3$[$Al(OH)_3$] during C and A follows different laws which is an indication of the complexity of the mechanics of the absorption of electrolytes by metallic hydroxides. The process of absorption of metals by Fe and Al hydroxides (basic salts) in the form of hydrolysis products predominates. Therefore, the effectiveness of C of metals which form dissolution-resistant hydroxides can be affected by regulating the extent of the hydrolysis of the compounds of these metals during the C with metallic hydroxides. Metallic ions are adsorbed on the MnO_2 hydrate by means of exchange with water ions.

V. P.

Card 2/2

SOV/156-58-2-28/48

AUTHORS: Chuyko, V. T., Mamenko, A. U., Todorov, I. A.

TITLE: Concentration of Bismuth-Traces From Metallic-Salt Solutions by Means of Partial Precipitation of the Macro-Component as Phosphate (Kontsentrirovaniye sledov vismuta iz rastvorov soley metallov putem chastichnogo osazhdeniya makrokomponenta v vide fosfata)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 2, pp. 317-319 (USSR)

ARSTRACT: The determination of bismuth-traces in metals where they often are an undesirable impurity, is usually carried out according to the concentration by means of carrying down the salts of these metals into the deposit of the solution. Ferric hydroxide, manganese dioxide, metallic sulfides and others are used as bismuth-collectors (Ref 1). The use of these collectors involves either the separation of bismuth from the collector or a regulation of the pH-value of the solution. It is aimed to concentrate bismuth - as indicated in the title - if small quantities of the macrocomponent do not prevent the photometric separation of bismuth. ...ies. It follows from a comparison

Card 1/3

Concentration of Bismuth-Traces From Metallic-Salt Solutions by Means of Partial Precipitation of the Macro-Component as Phosphate

of the methods described in the references 4, 5, and 6 that a quantitative co-precipitation of bismuth can be obtained with a partial precipitation of copper: a) by increasing the share of the macro-component in the deposit; b) by means of fractionation; c) by increasing the relation between the L_p-values of both the macro- and micro-component; a suitable precipitator must be selected for this purpose. The authors selected the last method c) and used sodium phosphate for this purpose. Moreover, they partially precipitated the macro-component from the concentrate in order to reduce its quantity in the deposit. Bismuth was photometrically recorded as a complex compound with thiourea. The tests have shown that the co-precipitation of bismuth is in the same way effective when precipitating the macro-component as phosphate or by introducing it readily prepared. The extraction of bismuth from solutions by means of prepared metallic phosphate deposits can be used for purifying the salts of the same metals of bismuth-impurities. The above bismuth-concentration was used by the authors for isolating copper, magnesium, and mixtures of copper and zinc from salt solutions. Bismuth apparently can be concentrated in the same

Concentration of Bismuth-Traces From Metallic-Salt Solutions by Means of Partial Precipitation of the Macro-Component as Phosphate

way from salt solutions of other metals which form phosphates of low solubility. There are 1 table and 7 references, 6 of which are Soviet.

ASSOCIATION: Kafedra obshchey i analiticheskoy khimii Cherkasskogo pedagogicheskogo instituta im. 300-letiya vossoyedineniya Ukrainy s Rossiyey (Chair of General and Analytical Chemistry of the Cherkassy Institute of Pedagogics imeni on the Occasion of the Tercentenary of the Reunion of the Ukraine With Russia)

SUBMITTED: November 8, 1957

SOV/156-58-3-22/53

AUTHORS: Chuyko, V. T., Todorov, I. A.

TITLE: The Concentration by Co-Precipitation of the Impurities of Arsenic and Phosphorus in Depositions (Kontsentrirovaniye primesey mysh'yaka i fosfora uvlecheniyem v osadok)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya tekhnologiya, 1958, Nr 3, pp. 495 - 497 (USSR)

ABSTRACT: The possibility of the concentration of arsenic and phosphorus in depositions from solutions of zinc and magnesium salts was shown experimentally. It was found that the carrying-down of microcomponents in the deposition amounts to almost 90%. By means of this method it is possible to concentrate arsenic and phosphorus from highly diluted solutions (dilution $1:10^9$). The carrying-down of the microcomponents arsenic and phosphorus remains the same when instead of a partial precipitation of the zinc and magnesium salts of the sample investigated newly precipitated zinc or magnesium oxide is added. The mechanism of the carrying-down of these arsenate and phosphate microcomponents is one of adsorption. There are 2 tables and 1 reference, which is Soviet.

Card 1/2

The Concentration by Co-Precipitation of the Impurities of Arsenic and Phosphorus in Depositions

SOV/156-58-3-22/53

ASSOCIATION: Kafedra khimii Cherkasskogo gosudarstvennogo instituta im.300-letiya vossoyedineniya Ukrainy s Rossiyey (Chair of Chemistry at Cherkassy State University imeni 300 Years Unification of the Ukraine With Russia)

SUBMITTED: November 4, 1957

Card 2/2

LOTAREVA, V.I.; CHUYKO, V.T.

Concentration of iron traces from solutions of nickel, cobalt, and zinc salts by a partial precipitation of macrocomponents. Trudy LTI no.48:119-123 '58. (MIRA 15:4)
(Iron--Analysis) (Salts)

CHUYKO, V.T.

Conference of chemistry teachers at the pedagogic institutes of the Ukrainian S.S.R. Ukr. khim. zhur. 24 no.1:133 '58. (MIRA 11:4)

(Ukraine--Chemistry--Study and teaching)

CHUYKO, V.T.; TODOROV, I.A.

Concentrating vanadium traces by coprecipitation with metal hydroxides. Izv.vys.ucheb.zav.; khim.i khim.tekh. 3 no.6:988-990 '60. (MIRA 14:4)

1. Ternopol'skiy meditsinskiy institut i Cherkasskiy pedagogicheskiy institut.

(Vanadium--Analysis)

CHUYKO, V.T.

Classification of the types of adsorption of electrolytes by heteropolar sorbents in very dilute solutions. Izv.vys.ucheb.zav.; khim.i khim.tekh. 3 no.6:1017-1021 '60. (MIRA 14:4)

1. Ternopol'skiy meditsinskiy institut, kafedra obshchey khimii.
(Adsorption) (Electrolytes)

CHUYKO, V.T.; CHUBKO, N.M.; SHPIKULA, V.M.

Determination of copper in biological material and its concentration by coprecipitation. Lab. delo 7 no.2:33-36 F '61. (MIRA 14:1)

1. Kafedra neorganicheskoy khimii (zav. - dotsent V.T.Chuyko) i kafedra fakul'tetskoy khirurgii (zav. - prof. A.G.Martynyuk) Ternopol'skogo meditsinskogo instituta (dir. - dotsent P.Ye.Ogiy).
(COPPER—ANALYSIS)

CHUYKO, V.T.; D'YACHENKO, N.P.

Methods of concentrating traces of zinc by coprecipitation. Zhur.-neorg.khim. 7 no.4:903-909 Ap '62. (MIRA 15:4)

1. Ternopol'skiy meditsinskiy institut, kafedra obshchey khimii.
(Zinc) (Precipitation (Chemistry))

CHUYKO, V.T.; D'YACHENKO, N.P.

Coprecipitation of traces of indium with basic copper salts from a copper nitrate solution and with zinc sulfide from a zinc sulfate solution. Zhur.neorg.khim. 7 no.4:910-914 Ap '62. (MIRA 15:4)

1. Ternopol'skiy meditsinskiy institut.
(Indium) (Salts) (Precipitation (Chemistry))

CHUYKO, V. T.

Principal laws governing the distribution of electrolyte ions between liquid and solid solvents. Izv. vys. ucheb. zav.; khim. i khim. tekh. 5 no.5:698-702 '62. (MIRA 16:1)

1. Ternopol'skiy meditsinskiy institut, kafedry obshchey i biologicheskoy khimii.

(Crystallization) (Ion exchange)
(Electrolyte solutions)

L 11409-63 S/032/63/029/005/002/022

EWP(q)/EWT(m)/BDS ASD JD

AUTHOR: D'yachenko, N.P. and Chuyko, V.T.

TITLE: Determination of ultrasmall zinc impurities in cadmium salts and salts of metals not precipitated by hydrogen sulfide

PERIODICAL: Zavodskaya laboratoriya, v. 29, no. 5, 1963, pp 522-523

TEXT: When cadmium hydroxide is partially precipitated from a solution of cadmium sulfate the zinc present in the solution as an impurity is distributed between the solution and precipitate. The Zn can be quantitatively extracted with CCl_4 if the Cd is in the form of the nitrate or sulfate and a considerable excess of iodide is added to form complexes with the Cd ions. Thiourea masks the influence of other heavy metals much more effectively than thiosulfate, ordinarily used. Previous investigations showed that traces of zinc are quantitatively co-precipitated with CdS from solutions containing metals not precipitated by H_2S at pH 2. This was used as the basis of a method of determining ultrasmall (0.5 - 2 micrograms/gram) impurities of Zn in such salts (Cd. Al, Cr, Fe, Mn and Ni sulfates were used). The article has 1 table.

ASSOCIATION: Ternopol'skiy gosudarstvennyy meditsinskiy institut (Ternopol' State Medical Institute)

Card 1/1

CHUYKO, V. T.

The Second All-Union Conference on the Preparation and Analysis of High-Purity Elements, held on 24-28 December 1963 at Gorky State University im. N. I. Lobachevskiy, was sponsored by the Institute of Chemistry of the Gorky State University, the Physicochemical and Technological Department for Inorganic Materials of the Academy of Sciences USSR, and the Gorky Section of the All-Union Chemical Society im. D. I. Mendeleyev. The opening address was made by Academician N. M. Zhavoronkov. Some 90 papers were presented, among them the following:

V. T. Chuyko, A. I. Gavrilyuk, and I. V. Negrebets'ka: Coprecipitation of traces (Ni, Cd) with iron hydroxide.

Z. G. Fratkina and V. S. Shebunin. Spectrochemical analysis of metal impurities concentrated as volatile fluorides.

(ZhuR ANAL Khim, 19 No.6, 1964 p 777-79)

CHUYKO, V.T.

Principal results and the objectives of further studies in the use of inorganic coprecipitants for concentrating metal traces. Trudy Kom. anal. khim. 15:236-243 '65. (MIRA 18:7)

CHUYKO, V.T.; SHPIKULA, V.M.

Determination of copper impurities in iron and nickel salts. Ukr. khim. zhur. 31 no.6:638-639 '65. (MIRA 18:7)

1. Ternopol'skiy gosudarstvennyy meditsinskiy institut.

CHUYKO, Ye.; KURAYEVA, N.

Elimination of diphtheria in Sevastopol. Pediatriia no.6:55-59 '61. (MIRA 14:9)
(SEVASTOPOL--DIPHTHERIA)

CHUYKO, Ye.A.; BLOKH, G.A.; OVCHARENKO, F.D.; GUDOVICH, N.V.; TSIPENYUK, E.V.

Activation of kaolin with the cation-active substance "alkamon OS-2." Kozh.-obuv. prom. 6 no.9:13-16 S '64. (MIRA 17:12)

L 25770-65 EWT(m)/EPF(c)/T/EWP(j)/EPR Pc-4/Pr-4/Ps-4 WW/MLK/RM

ACCESSION NR: AT5002664 S/0000/64/000/000/0083/0098

37
26
B+1

AUTHOR: Chuyko, A. A.; Chuyko, Ye. A.

TITLE: Olefinic, aminated and carboxylated silica fillers and their chemical interaction with polymers

SOURCE: AN UkrSSR. Institut khimii vysokomolekulyarnykh soyedineniy. Sintez i fiziko-khimiya polimeroy; sbornik statey po rezul'tatam nauchno-issledovatel'skikh rabot (Synthesis and physical chemistry of polymers; collection of articles on the results of scientific research work). Kiev, Naukova dumka, 1964, 83-98

TOPIC TAGS: silica filler, filler polymer interaction, olefinic silica, aminated silica, carboxylated silica, synthetic rubber, organosilane, siloxane filler, silicon carbon bond, butadiene styrene rubber, butadiene acrylonitrile rubber, rubber mechanical property

ABSTRACT: Silica with olefinic, amine, or carboxyl functional terminal groups was prepared, tested for thermal stability by infrared analysis of thermally treated specimens, and used as fillers in synthetic rubbers whose properties were studied to determine the interaction between functional groups in fillers and rubbers. Colloidal silica was chlorinated with $SiCl_4$ and reacted with allyl alcohol or allylmagnesium bromide to introduce allyloxy or allyl groups, or treated directly

Card 1/3

with organosilanes to prepare the specimen; e.g., vinyltrichlorosilane reacted by hydrolysis and formation of siloxane type bonds. Infrared analysis showed the presence of both double bonds and -Si-C≡C-Si- bonds in this silica, and demonstrated the stability of silicon-carbon bonds up to nearly 500C. Allyloxysilica was shown to be formed by formation of Si-O-C bonds which were stable to 200C, the amount of hydroxyl groups increasing on heating to 300 and 500C. Propyloxy- and ethyl-modified silica was also prepared. Used as fillers in butadiene-styrene (SKS-30) rubber and the butadiene-acrylonitrile copolymers SKN-26 and SKN-40, olefin-modified silica increased crosslinking and markedly improved the mechanical properties and particularly the tensile strength as compared with non-modified silica ("white carbon black") or alkyl-modified silica. Aminopropylsilica was obtained by reaction with γ-aminopropyltriethoxy-silane and used as a filler for SKS-30-1 carboxylated butadiene-styrene rubber; by interaction with rubber-carboxyls, the terminal amino-groups of the rubber gave an increase in cross-linking and mechanical strength with a slight decrease in relative elongation. Carboxylated silica filler was prepared from white carbon black U-333 via vinylated silica by reaction with vinyltrichlorosilane and copolymerization with methacrylic acid. With SKSMVP-15A (butadiene copolymer with 15% 2-methyl-5-vinyl-pyridine), the modified filler improved tensile strength and mechanical parameters as compared with non-modified silica. "The infrared analysis was carried out by A. N. Sidorov, and the carboxylated silica was studied in detail by

L 25770-65

ACCESSION NR: AT5002664

B. A. Artemov." Orig. art. has: 6 figures, 4 tables and 11 formulas.

ASSOCIATION: Institut fizicheskoy khimii im. L. V. Pisarzhevskogo AN UkrSSR (Physical chemistry institute, AN Ukr SSR)

SUBMITTED: 22Jun64 ENCL: 00 SUB CODE: OC, MT

NO REF SOV: 008 OTHER: 003

Card 3/3

L 10757-63 EPR/EWP(j)/EPF(c)/EWT(m)/BDS—AFFTC/ASD—Ps-4/Pc-4/Pr-4—
RM/WW
ACCESSION NR: AP3003291 S/0138/63/000/006/0031/0034

AUTHOR: Chuyko, A. A.; Neymark, I. Ye.; Landau, I. M. (Deceased); Tsapenyuk, E.V.; Chuyko, Ye. A.

TITLE: Effect of the chemical nature of filler surface and ionizing radiation on the properties of rubbers

SOURCE: Kauchuk i rezina, no. 6, 1963, 31-34

TOPIC TAGS: rubbers, SKS-30; SKN-40, SKB; fillers; silica; Belaks; modified silica; vinyl-substituted silica; vulcanization; vulcanizate properties; tensile strength; modulus; swelling; ionizing radiation, butadiene-styrene rubber; nitrile rubber, sodium butadiene rubber; silica surface hydroxyls

ABSTRACT: The effect of the chemical nature of the filler surface on the physico-mechanical properties of rubbers has been studied. Butadiene-styrene (SKS-30), nitrile (SKN-40) and sodium butadiene (SKB) rubbers loaded with unmodified silica and with silica whose surface hydroxyls had been substituted by allyloxy or vinyl radicals were used. Use of modified silica in standard rubber mixes (containing 100 parts rubber and 50 to 60 parts filler) was shown to improve the physico-mechanical properties of the vulcanizates. For example, the tensile strength of

Card 1/3

L 10757-63
ACCESSION NR: AP3003291

2

SKN-40 rubber containing 60% filler increased from 126.3 kg/cm^2 with unmodified silica to 163.6—168 kg/cm^2 with vinyl-substituted silica (vinyl silica); the respective values of the modulus at 600% elongation and swelling at equilibrium in benzene were 55.2 and 134 kg/cm^2 and 30 and 15%. This improvement was attributed to greater compatibility of the filler and the rubber and to a reaction between the olefin radicals of the filler surface and the rubber with the possible formation of C-C and C-S-C linkages. The effect was studied of ionizing radiation from a Co^{60} source at a dose rate of 77 r/sec on nonloaded SKS-30 rubber and on SKS-30 loaded (ratio 1/1) with unmodified and with modified silica (Belaks) containing 2.5% vinyl, methyl, or ethyl radicals. Irradiation did not affect the tensile strength and the modulus at 100% elongation of unloaded rubber but considerably improved these properties in loaded rubbers, particularly with vinyl silica. The maximum effect of irradiation is attained after 48 hr. These results were attributed to the participation of the filler in the formation of the three-dimensional network. In particular, the allyl or vinyl groups of the filler and the rubber macromolecules form radicals which link the two through the formation of covalent bonds. It is concluded that the structure and the physicomechanical properties of vulcanizates can be controlled by modifying the nature of the organic radicals on the silica surface, the number of such radicals, the composition of the vulcanizates, and the method of vulcanization. Orig. art. has:

Card 2/3

L 10757-63
ACCESSION NR: AP3003291

1 figure and 2 tables.

ASSOCIATION: Institut fizicheskoy khimii im. L. V. Pisarzhevskogo AN USSR (Institute of Physical Chemistry, AN SSSR); Kiyevskiy regeneratorno-rezinovyy zavod (Kiev Reclaim Rubber Plant)

SUBMITTED: 00 DATE ACQ: 10Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 004 OTHER: 004

Card 3/3

L 41266-66 EWT(m)/EWP(j)/T IJP(c) WW/JWD/RM

ACC NR: AP6022447 (A) SOURCE CODE: UR/0069/66/028/002/0278/0282

AUTHOR: Tertykh, V. A.; Chuyko, Ye. A. -- Chuiko, E. A.; Chuyko, A. A. -- Chuiko, A. A.; Neymark, I. Ye. -- Neimark, I. E.

ORG: Institute of Physical Chemistry, AN UkrSSR, Kiev (Institut fizicheskoy khimii AN UkrSSR)

TITLE: Amino-organo silicas as chemically active sorbents and fillers of polymer materials

SOURCE: Kolloidnyy zhurnal, v. 28, no. 2, 1966, 278-282

TOPIC TAGS: organosilicon compound, polymer physical chemistry, chemical absorption

ABSTRACT: Clarification of mechanisms by which acid substances react with an adsorbent surface was sought through an analysis of infrared absorption spectra for the adsorption of hydrogen chloride on amino organosilica and of methacrylic acid on an amino organoaerosil. A supplementary analysis concerned adsorption of methacrylic acid on the named aerosil from an aqueous solution. Another aspect of the study involved reinforcement of the carboxyl-containing polymer SKS 30-1 by dispersion type amino organosilicic fillers. Results indicate that chemisorption occurs, with an accompanying formation of chemical compounds on the adsorbent surface. Amino and vinylamino derivatives of silica white A, used as fillers, reinforced the carboxyl-containing polymer through interaction of functional groups and the accompanying

Card 1/2 UDC: 541.183.23

L 41266-66
ACC NR: AP6022447

crosslinking of polymer and filler. With great satisfaction, the authors express their gratitude to Candidate of Physical-Mathematical Sciences A. N. Sidorov and Academician A. N. Terenin for their advice and assistance in performing the work. Orig. art. has: 1 table and 3 figures.

SUB CODE: 07/ SUBM DATE: 22Jul64/ ORIG REF: 002/ OTH REF: 001

Card 2/2

L 00733-67 EWT(m)/EWP(j)/T IJP(c) WW/RM
ACC NR: AP6024846 (A) SOURCE CODE: UR/0073/66/032/004/0371/0377

AUTHOR: Chuyko, A. A.; Pavlik, G. Ye.; Tertykh, V. A.; Chuyko, Ye. A.; Artemov, V. A.; Neymark, I. Ye.; Tsipenyuk, E. V.

ORG: Institute of Physical Chemistry, AN UkrSSR (Institut fizicheskoy khimii AN UkrSSR)

TITLE: Carboxylorganosilicas - chemically active fillers for polymers. Report No. 1. Synthesis and adsorption properties of carboxylorganosilicas, and their use in the reinforcement of vinylpyridine rubber

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 32, no. 4, 1966, 371-377

TOPIC TAGS: silica, graft copolymer, synthetic rubber, filler

ABSTRACT: Carboxyl derivatives of SiO_2 were synthesized by copolymerization of methacrylic acid with vinyl silicas having various quantities of grafted vinyl groups on their surface. IR spectroscopic and ion exchange methods confirmed the grafting of methacrylic acid to the surface of vinyl silica. A study of the surface characteristics showed that methanol, diethylamine, and pyridine are chemisorbed on the acid functional groups of the carboxylorganosilicas, forming the corresponding surface compounds. Filling of a vinylpyridine polymer (SKMVP-15) with carboxylorganosilicas caused a reinforcement of the polymer system, probably because of a chemical interaction between the carboxyl groups of the filler and the basic pyridine groups of the rubber macromol-

Card 1/2 UDC: 541.182.23

L 00733-67
ACC NR: AP6024846

ecules, resulting in the formation of cross linkages. Orig. art. has: 3 figures and 1 table.

SUB CODE: 11/ SUBM DATE: 22Jul64/ ORIG REF: 006/ OTH REF: 006

Card 2/2

L 45196-65 EWG(s)-2/EWP(j)/EWT(m) Pc-4/Pw-4 RM
ACCESSION NR: AP5014969 UR/0228/64/000/007/003/004

21
8

AUTHOR: Chuyko, A.V. (Candidate of technical sciences); Christova, Ye. M. (Candidate of technical sciences); Romodanov, A. N. (Engineer); Chuyko, Ye. S. (Engineer)

TITLE: Plastic-concrete based on the monomer FA

SOURCE: Stroitel'nyye materialy, no. 7, 1964, 3-4

TOPIC TAGS: monomer, cement, concrete

Abstract: As a result of the testing of various polymer-cement samples, it was decided to eliminate the mineral cement binder from the concrete composition. Furfural-acetone monomer, FA, strengthened with sulfobenzoic acid was used as the binder in the organomineral plastic cement. Dry quartz sand, free of lime inclusions was the acid resistant filler. The moisture content of the sand did not exceed 0.5%. The composition of the concrete was (in weight): monomer FA -- 16%; quartz sand -- 80%; sulfobenzoic acid -- 4%. The material was tested in melted pork fat and in grade I technical fat. The results of the investigation of the durability of plastic-cement indicated that this material can be considered sufficiently durable for floors where animal fats are found, as in food

Card 1/2

L 45196-65

ACCESSION NR: AP5014969

plants, canning factories, and tanneries. Good results were obtained with plastic-cement on winery floors. The process for producing the organomineral plastic-cement is described briefly. Orig. art. has 2 tables.

ASSOCIATION: none

SUBMITTED: 00	ENCL: 00	SUB CODE: MT
NO REF SOV: 001	OTHER: 000	JPRS

Card 2/2

CHUYKO, A.V., kand.tekhn.nauk; CHISTOVA, Ye.M., kand.tekhn.nauk; ROMODANOV, A.N., inzh.; CHUYKO, Ye.S., inzh.

Floor deformations in enterprises of the canning industry. Prom. stroi. 42 no.2:19-21 '65. (MIRA 18:4)

TAYTS, N.Yu., doktor tekhn. nauk; KLEYNER, M.K., inzh.; ZAVALISHIN, Ye.K., inzh.; KALUGIN, Ya.P., inzh.; FALILEYEV, I.L., inzh.; KAGAN, N.I., inzh. [deceased]; Prinimali uchastiye: POPOV, V.N. inzh.; CHUYKOV, A.A., inzh.; MINUKHINA, L.N., inzh.; KHATSAREVICH, V.R., inzh.; TOLMACHEVA, I.A., inzh.; BAZHENOVA, V.N., inzh.

Technological and thermodynamic characteristics of strip heating for the continuous furnace welding of pipes. Stal' 24 no.8:746-750 Ag '64. (MIRA 17:9)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut, Ural'skiy nauchno-issledovatel'skiy trubnyy institut i Chelyabinskiy truboprokatnyy zavod.

Chuykov, B.A.

AUTHORS: Ptushinskiy, Yu.G. and Chuykov, B.A. 109-12-4/15

TITLE: Mass-spectrometric Determination of the Composition of the Residual Gases in Electron Devices with Porous Metal-film Cathodes (L-cathodes) (Mass-spektrometricheskoye opredeleniye sostava ostatochnykh gazov v elektronnykh priborakh s poristym metallo-plenochnym katodom)

PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol. II, No.12, pp. 1497-1501 (USSR).

ABSTRACT: The method of measurement was similar to that employed by G. Pikus (Ref.4). The investigation was carried out in analyser tubes fitted with porous metal-film cathodes which were provided with barium oxide fillers (BaO + 10% Ta). After the sealing off, the pressure in the tube was reduced to 10^{-7} mmHg. A spectrogram was then taken for a cold cathode (spectrogram of the background) and the cathode was next heated to a temperature of 1 000 °C and a new spectrogram was recorded. The results are shown in Fig.1, which illustrates a spectrogram of the background (shaded areas) and an initial spectrogram (non-shaded areas); the figure relates the value of the spectrometer current to the atomic mass. From the figure, it is seen that the tube with an L-cathode operating at a pressure of 10^{-7} mmHg contains the following residual gases: hydrogen (m = 2) , helium (m = 4),

Card1/2

Mass-spectrometric Determination of the Composition of the Residual Gases in Electron Devices with Porous Metal-film Cathodes (L-cathodes)

nitrogen (m = 14 and 28), carbon monoxide (m = 28), oxygen (m = 16) and a small quantity of chlorine (m = 35 and 37). Further experimental results are shown in Fig. 2, which represents the spectrometer current as a function of time for various residual gases; the curves of Fig.2 for periods up to 200 hours were taken at zero cathode currents, while after 200 hours, the cathode was operated at 20 mA. The aim of this work was not the determination of the quantities of various residual gases, but rather the detection of all the possible gases and their mixtures. The author expresses his gratitude to the Corresponding Member of the Ac.Sc. Ukrainian SSR N.D. Morgulis for his valuable advice. There are 2 figures and 9 references, 5 of which are Slavic.

ASSOCIATION: Physics Institute of the Ac.Sc. Ukrainian SSR , Kiyev. (Institut fiziki An USSR, g. Kiyev)

SUBMITTED: May 8, 1957.

AVAILABLE: Library of Congress

Chuykov, B.A.

AUTHORS: Ptushinskiy, Yu.G. and Chuykov, B.A. 109-12-9/15

TITLE: Diffusion of the Strontium Vapours through the Plug of a Porous Metal-film Cathode (D-cathode) (Diffuziya parov strontsiya skvoz' gubku poristogo metallo-plenochnogo katoda)

PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol. II, No.12, pp. 1530 - 1535 (USSR)

ABSTRACT: The problem has been investigated by a number of authors (Refs. 1-6) but it was felt that an additional investigation was justified. The experiments were carried out on a tungsten plug, having a porosity of 0.2 (see Fig. 2a); the velocity of the strontium vapour diffusion was compared with the corresponding free flow of the strontium vapour from a "black body" (see Fig. 2b). In both cases, the dispenser contained the same mixture (Ba, Sr)CO_3 which was marked by the radioactive isotope Sr^{89} and a quantity of tantalum powder which was held in a tantalum ampule having a sieve-like cover. The experiments were carried out in a special tube (see Fig. 3) which contained a fixed cathode and a system of seven movable collectors. The presence of the collectors permitted the measurement of the velocity of the diffusion as a function of temperature. The measurements were carried out over a temperature range of 1 350 to 1 550 °K.

Cardl/2

Diffusion of the Strontium Vapours through the Plug of a Porous Metal-film Cathode (L-cathode)

The results are illustrated in Fig. 4. This shows the pressure of the strontium vapours as a function of temperature to a semi-logarithmic scale. The Curves 2 and 3 refer to the pressure above the surface of the cathode, while the Curve 1 relates to the pressure in the chamber of the cathode. From the above, it is concluded that diffusion of the strontium vapours through a fine plug, having a porosity of 0.2, is mainly due to the migration mechanism (over the investigated range of temperatures). The jump in the vapour pressure between the surface and the chamber ranges from 280 to 1 800 for the investigated temperatures. It was also found by interpolation that for the normal operating temperature of 1 000 °C, this jump would be equal to 100.

The author expresses his gratitude to Corresponding Member of the Ac.Sc. Ukrainian SSR N.D. Morgulis for his interest and valuable advice. There are 4 figures and 10 references, 6 of which are Slavic.

ASSOCIATION: Physics Institute AS Ukrainian SSR, Kiyev
(Institut fiziki AN USSR, g. Kiyev)

SUBMITTED: May 8, 1957
AVAILABLE: Library of Congress

Card2/2

9.3150
~~10 (5)~~ 5.1600

66166

AUTHORS: Morgulis, N. D., Ptushinskiy, Yu. G., Chuykov, B. A. SOV/20-128-5-18/67

TITLE: Some Specific Features of the Partial Adsorption of Residual Gas Components at Very High Vacuum

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 5, pp 930-932 (USSR)

ABSTRACT: In the present paper the authors investigate the properties of a "natural" mixture of residual gases generally present in electronic devices at high vacuum. For this investigation the authors use a mass spectrometric device intended for investigations in the field of high-vacuum processes. The inside of the mass spectrometric analyzer tube employed was fitted with a long tungsten band. This tube consisted wholly of glass and was soldered. The pressure of the residual gases was $p \sim 1.10^{-8}$ torr. The tungsten band served as the basis on whose surface the components of the residual gases investigated were adsorbed. A schematic representation of the mass spectrum of these gases is given in a figure. The present problem was investigated by the well-known "flash" method. The relative degree of adsorption $\Delta I/I_m$ of each component of this mixture

Card 1/4

4

may be determined from data given in the above-mentioned figure. This degree of adsorption is proportional to the mean condensation probability $\bar{k}_m : \frac{\Delta I_m}{I_m} = \frac{BN_m q_n}{Ap_m q_n} = C\bar{k}_m$, where N_m denotes the total amount of gas adsorbed within the given time. The following interesting conclusion is arrived at: $\bar{k}_m(He) = 0$, $\bar{k}_m(H_2) \approx \bar{k}_m(N_2)$. In order to obtain more exact data on the specific features of adsorption of each gas component in the mixture, the partial adsorption rates were determined by measuring the dependence of the quantity ΔI_m on the time t of previous adsorption exposure. This dependence is represented in a diagram for the 2 main components H_2 and N_2. For comparison, the dependence ΔI is shown for the total "flash" of all gases in the ion source. The total pressure of the gases amounted to $p' \approx 1.10^{-8}$ torr. The desorption of the components H_2 and N_2 from tungsten after extremely long exposure of the latter in the residual gas atmosphere

Some Specific Features of the Partial Adsorption of Residual Gas Components at Very High Vacuum

can be investigated more closely by means of the temperature variation with respect to time. In doing so, the authors observed the polyphase nature of the adsorbed states of H_2 and N_2 on tungsten, which complicates this phenomenon even more. The third diagram gives the characteristics of partial dependence on adsorption of the "pumping out" of the gas components H_2 and N_2 from the mixture of residual gases, after the tungsten band had been freed from these components by "flashing" at high temperatures and then cooled. The curves shown in figure 2 are qualitative representations of the integrals of the curves given in figure 3. Investigations of this problem are being continued. There are 3 figures and 2 references, 1 of which is Soviet.

ASSOCIATION: Institut fiziki Akademii nauk USSR (Institute of Physics of the Academy of Sciences, Ukr SSR)

PRESENTED: March 27, 1959, by I. V. Obreimov, Academician

66166

Some Specific Features of the Partial Adsorption of Residual Gas Components at Very High Vacuum

SOV/20-128-5-18/67

4

SUBMITTED: March 16, 1959

Card 4/4

S/109/62/007/004/011/018
D290/D302

9,4110

AUTHORS: Ptushinskiy, Yu.G., and Chuykov, B.A.

TITLE: Interaction of molecular beams of barium oxide with incandescent tungsten surfaces

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 4, 1962, 687 - 692

TEXT: The processes of thermal dissociation, chemical reaction and thermal ionization were studied in order to elucidate the basic mechanism of adsorption and the properties of tungsten cathodes coated with barium oxide. A mass-spectrometer was used. The degree of dissociation varied with temperature; appreciable dissociation took place above about 1700°K; dissociation was practically complete above about 2200°K (the beam currents were between 2×10^{10} and 2×10^{12} molecules of BaO/cm^2/sec.). There was no appreciable chemical reaction if the tungsten surface was only partly covered with a monomolecular layer of BaO; a vigorous reaction took place if the surface has been previously covered with a thick layer of BaO; barium tungstate is formed. Barium ions were emitted from the tungs-

Card 1/2

ten surface at temperatures above about 1700°K; no BaO ions were observed. The maximum in the curve of barium ion current against temperature is probably caused by the oxygen that is produced as the BaO dissociates. Desorption of BaO from the tungsten surface took place in two stages, starting at about 1100°K and 1400°K; the two stages were more distinct the greater the fraction of the surface that was initially covered with BaO. There are 5 figures and 9 references: 5 Soviet-bloc and 4 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: M. Inghram, W. Ghupka, R. Porter, J. Chem. Phys., 1955, 23, 11, 2159; R. Bayard, D. Alpert, Rev. Scient. Instrum., 1950, 21, 6, 571; R. Huges, P. Coppola, H. Evans, J. Appl. Phys., 1952, 23, 6, 635; P. Russel, A. Eisenstein, J. Appl. Phys. 1954, 25, 8, 954.

ASSOCIATION: Institut fiziki AN USSR (Physics Institute AS UkrSSR)

SUBMITTED: May 15, 1961

PTUSHINSKIY, Yu.G.; CHUYKOV, B.A.

Interaction of a molecular beam of BaO with the surface of heated W. Radiotekh. i elektron. 7 no.4:687-692 Ap '62. (MIRA 15:3)

1. Institut fiziki AN USSR.
(Tungsten) (Barium oxide)

PTUSHINSKIY, Yu.G. [Ptushyns'kyi, IU.H.]; CHUYKOV, B.A. [Chuikov, B.O.]

Peculiarities of the partial adsorption of residual gas components at very high vacuum. Part 2. Ukr.fiz.zhur. 7 no.1:79-81 Ja '62. (MIRA 15:11)

1. Institut fiziki AN UkrSSR, Kiyev.
(Gases—Absorption and absorption)
(Vacuum technology)

PTUSHINSKIY, Yu.G.; CHUYKOV, B.A.

Adsorption of hydrogen on the surface of tungsten covered by oxygen. Kin. i kat. 5 no.3:513-519 My-Je '64.

(MIRA 17:11)

1. Institut fiziki AN UkrSSR.

PTUSHINSKIY, Yu.G. [Ptushyns'kyi, IU.H.]; CHUIKOV, B.A.

Mass spectrometric study of oxygen desorption from tungsten. Ukr. fiz. zhur. 9 no.9:1035-1038 S '64. (MIRA 17:11)

1. Institut fiziki AN UkrSSR, Kiyev.

35102
S/185/62/007/001/012/014
D299/D302

26.2358

AUTHORS: Ptushyns'kyy, Yu.H., and Chuykov, B.O.

TITLE: Some peculiarities of partial adsorption of residual-gas components in an ultrahigh vacuum. II

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 1, 1962, 79 - 81

TEXT: New results are given concerning the kinetics of adsorption of residual gases and the temperature stability of residual gases adsorbed on tungsten films. The present article is a continuation of N.D. Morgulis, Yu.G. Ptushinskiy and B.A. Chuykov (Ref. 2: DAS SSSR, 128, 930, 1958). In Ref. 2 (Op.cit.) the glow method was combined (for the first time) with mass-spectrometer investigations; such a combined method yields more comprehensive results and is also used in the present investigation. The experimental apparatus consisted of a mass-spectrometer with glass lamp-analyzer suitable for ultrahigh-vacuum investigations. The pressure of the residual gases was kept at $2 \cdot 10^{-8}$ mm Hg. Results: The adsorption characteri-

Card 1/3

stics of residual gas components are expressed by the ratio $\Delta I_m/I_m$ (denoting the increase in ion current during the glow, and the ion current of the given component, respectively). A figure shows the dependence of $\Delta I_m/I_m$ on adsorption time for H_2, CH_4 and $CO + N_2$, at room temperature; the corresponding curves for He and Ar coincided with the abscissa. From the figure it is evident that the residual gases can be divided into three groups from the point of view of adsorbability: hydrogen, nitrogen and carbon monoxide are most actively adsorbed; methane which is not readily adsorbed, and the inert gases which are practically not adsorbed at all. Hence, in order to determine the influence of residual gases on the surfaces under consideration, it is necessary to take into account the rate of adsorption of the various gas components and not only their pressure. Further, the effect of the temperature of the tungsten film on the adsorption of the residual-gas components, was investigated, (for a temperature range of 300 to 1500°K). It was found that CH_4 is completely vaporized from the tungsten surface at $T \sim 600°K$, H_2 at $T > 800°K$, and $CO + N_2$ - at $T > 1500°K$. Thus, in order to clean

completely the tungsten surface from residual gases under ultra-high-vacuum conditions, it has to be heated to temperatures above 1500°K. If the temperature of the surface is kept at 700°K, it is possible to get rid of CH_4 and H_2, and then to study the adsorption of CO and N_2. There are 2 figures and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: D. Hagstrum, Rev. Sci. Instr., 24, 1135 1953; J. Becker, C. Hartmann, J. Phys. Chem., 57, 153, 1953.

ASSOCIATION: Instytut fizyky AN URSR (Institute of Physics of the AS UkrRSR), Kyyiv

SUBMITTED: July 22, 1961

Card 3/3

X

CHUYKOV, Fedor Minayevich; IVANOV, G., red.; POPOVA, T., tekhn.red.

[Everything for the individual] Vse dlia cheloveka. Moskva, Gos.izd-vo polit.lit-ry, 1959. 78 p. (MIRA 14:4)
(Russia--Economic conditions)

NAYDYSH, A.M., prof.; BRATISHKO, A.S., inzh.; ZEMLYANSKIY, L.V., inzh.; LEBEDEV, N.N., inzh.; CHUYKOV, G.L., inzh.

Determining the optimum load on a panel for mines with a high methane liberation. Izv. vys.uchev.zav.:gor.zhur. 7 no. 4:26-32 '64. (MIRA 17:7)

1. Donetskiy politekhnicheskiy institut. Rekomendovana kafedroy razrabotki mestorozhdeniy poleznykh iskopayemykh.

L 34838-65 EWG(j)/EWT(m)/EPF(c)/EPR/EWP(t)/EWP(b) Pr-4/Ps-4 IJP(c) JD

ACCESSION NR: AP5008539 S/0286/65/000/006/0053/0053

AUTHOR: Dudin, V. V.; Ivanov, A. N.; Chuykov, L. I.

TITLE: An installation for making parts from synthetic silicon dioxide. Class 32, No. 169218

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 6, 1965, 53

TOPIC TAGS: synthetic material, silicon dioxide, industrial equipment

ABSTRACT: This Author's Certificate introduces an installation for making parts from synthetic silicon dioxide. The device contains rotating spindles with arbors and stationary flame sprayers. The manufacturing process is mechanized and the productivity of the device is increased by using a stand which has longitudinal and transverse guides to move a table which carries the spindles and sprayers.

ASSOCIATION: none

SUBMITTED: 19Mar64 ENCL: 01 SUB CODE: MT, IE

NO REF SOV: 000 OTHER: 000

Card 1/1

CHUYKOV, N.A., fel'dsher

Feldsher V.A. Valiaev. Fel'd i akush. 25 no. 10:60 O '60.
(MIRA 13:10)

1. Sovkhoz "Severnaya ferma" Vologodskoy oblasti.
(VALIAEV, VASILII AFANAS'EVICH)

CHUYKOV, N. A., fel'dsher (Vologodskaya oblast')

Honored Medic. Fel'd. i akush. 27 no.6:59 Je '62.
(MIRA 15:7)

(STENILOVSKII, ALEKSANDR PETROVICH, 1889-)

CHUYKOV, N. K.; PANSHIN, A. I.

Water - Waste

Secondary use of the cooling water of oxidation tanks. Prom. energ. 9 no. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, April 1952. UNCLASSIFIED.

CHUYKOV, P.I.

Results of experimental and practical works on layering branches gutta-bearing spindle trees. Trudy Inst. lesa 46:56-60 '58.
(Spindle tree) (Plant propagation) (MIRA 11:6)

CHUYKOV, P. N.

"Metal Plating," Tekh. Zhur., No.1, 1948

CHUYKOV, Semen Afanas'yevich; TIKHANOVA,V.A., redaktor; RATNER,A.N., tekhnicheskiy redaktor

[The image of India; an artist's sketches] Obrazy Indii; zapiski khidozhnika. [Moskva] Izd-vo "Sovetskii khudozhnik," 1956. 173 p. (MIRA 9:3)
(India--Description and travel)

CHUYKOV, V., marshal Sovetskogo Soyuza

To new frontiers. Voen. znan. 41 no.1:2-3 Ja '65.
(MIRA 18:2)

CHUYKOV, V.I., marshal Sovetskogo Soyuza.

Great feat of the Soviet people and its Armed Forces. Voen.znam. 33 no.5:1-3 My '57. (MLRA 10:7)
(Russia--Armed forces) (World War, 1939-1945)

CHUYKOV, V., marshal Sovetskogo Soyuza

Provide troops with modern training equipment. Voen.vest. no.9:8-11 S '60. (MIRA 14:7)
(Military education—Equipment and supplies)

CHUYKOV, V.I., marshal Sovetskogo Soyuza, dvazhdy Geroy Sovetskogo Soyuza

This is the way victory was won. Voen.znan. 38 no.5:17-18 My '62. (MIRA 15:5)
(Stalingrad, Battle of, 1942-1943)

CHUYKOV, V., marshal Sovetskogo Soyuza

The protection of the population is the main task of civil defense. Voen. znan. 40 no.1:3-4 Ja '64. (MIRA 17:4)

ANIKIN, A.G.; DUGACHEVA, G.M.; CHUYKOV, Yu.N.

Determination of the purity and crystallization temperatures of pure hydrocarbons in amounts of 1 to 1.5 ml. Vest. Mosk. un. Ser. 2: Khim. 15 no.5:31-35 S-O '60. (MIRA 13:11)

1. Moskovskiy gosudarstvennyy universitet, kafedra fizicheskoy khimii. (Hydrocarbons) (Crystallization)

CHUYKOVA, A.T.

Increasing the hardiness of winter crops. Trudy WGU 42 no.4:73-75 '55. (MIRA 11:6)

(Plants--Frost resistance)

CHUYKOVA, A. T.

USSR / Cultivated Plants. Cereals. M

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34659

Author : Chuiykova, A. T.
Inst : Geographical Society USSR, Voronezh.
Title : Appraisal of Thermic Conditions in Corn Growth in the Period from Sowing to Sprouting

Orig Pub : Izv. Voronezhsk. Geogr. o-va SSSR, 1957, vyp. I. 125-128.

Abstract : No abstract given

Card 1/1

CHUYKOVA, A.T.

Evaluation of weather influence on the speed of corn development and yield in Voronezh Province. Izv.Vor.otd.Geog.ob-va no.3:153-158 '61. (MIRA 15:11)

(Voronezh Province--Crops and climate)
(Voronezh Province--Corn (Maize))

ACCESSION NR: AR4015479 S/0169/63/000/012/B079/B079

SOURCE: RZh. Geofizika, Abs. 12B414

AUTHOR: Chuykova, A. T.

TITLE: Contribution to the problem of the influence of microrelief of the Central Russian Highland on atmospheric precipitations

CITED SOURCE: Izv. Voronezhsk. otd. Geogr. o-va SSSR, vy*p, 4, 1962, 77-82

TOPIC TAGS: atmospheric precipitation, orography, microrelief, atmospheric circulation, precipitation, precipitation distribution, weather forecasting, agrometeorology

TRANSLATION: The main reason for the irregular distribution of precipitations should be sought in pecularities of atmospheric circulation. Under the influence of orography, the regions of atmospheric processes can intensify or abate. Peculiarities in the distribution of precipitations in the TsChO (Central Chernozem Oblast) territory was studied on climatic charts of precipitations during the warm and cold periods of the year. An analysis of the maps attests to the extreme irregularity of the distribution of precipitations for the territory under study which can be

Card 1/2

ACCESSION NR: AR4015479

explained by the rugged relief of the locality and its roughness. The local relief is evaluated from the viewpoint of its influence on the development of vertical air movements. Regioning of the territory into three large zones is done according to the amount of the annual sums of precipitations. A study of the pecularities of the formation of precipitations depending on local conditions is closely connected with the solution of many practical problems such as the forecast of precipitations and the spacing of agricultural crops. G. Suzyumova.

DATE ACQ: 09Jan64 SUB CODE: AS, PH ENCL: 00

Card 2/2

CHUYKOVA, A.T.

Changes in precipitation on the territory of the Central Chernozem Provinces in the last 25 years. Nauch. zap. Ver. otd. Geog. ob-va; 95-98 '63. (MIRA 17:9)

Chuykova, N. I.

GLOTSER, L.M., kand.tekhn.nauk; CHUYKOVA, N.I., inzh.

Mechanical separation of fluff and overhair in coarse goat's hair.
Leg.prom. 16 no.10:40-42 O '56. (MIRA 10:12)
(Woolen and worsted manufacture)

CHUYKOVA, N.I., inzh.; RABINOVICH, R.S.

New twister for woolen yarn. Nauch.-issl. trudy TSNNIShersti no.17:24-29 '62. (MIRA 17:12)

LEZHEBRUKH, G.O., kand.tekhn.nauk; CHUYKOVA, M.I., inzh.

Automatic control of silver weight on roving machines. Tekst. prom. 19 no.2:25-31 F '59. (MIRA 12:5)
(Spinning machinery) (Automatic control)

CHUYKOVA, N.I., inzh.; RABINOVICH, R.S., inzh.; VISHNYAK, I.A., inzh.

New twister for twist woolen yarn. Tekst.prom. 21 no.12:27-28 D '61. (MIRA 15:2)

1. TSentral'nyy nauchno-issledovatel'skiy institut sherstyanoy promyshlennosti (TsNIIShersti) (for Chuykova). 2. Konstruktorskoye byuro Vsesoyuznogo nauchno-issledovatel'skogo instituta tekstil'nogo mashinostroyeniya (VNIILTekmash) (for Rabinovich). 3. Spetsial'noye konstruktorskoye byuro Tashkentskogo zavoda tekstil'nogo mashinostroyeniya Tashkentskogo sovnarkhoza (for Vishnyak).
(Spinning machinery)

CHUYKOVA, N.I., aspirant; GUSEV, V.Ye., doktor tekhn. nauk, prof., rukovoditel' rabot

Gauge blocks in the mechanisms of the automatic control of the evenness of the sliver. Tekst. prom. 24 no.3:40-45 Mr '64. (MIRA 17:9)

1. Moskovskiy tekstil'nyy institut.

SAVOCHKINA, Ye.N.; CHUYKOVA, P.G.

Intrusion of Kunur-Sandyktas Mountain in the Batpak granite massif (eastern Kazakhstan). Izv. vys. ucheb. zav.; geol. i razv. 6 no.9:40-46 S '63. (MIRA 17:10)

1. Vsesoyuznyy aerogeologicheskiy trest.

ACCESSION NR: AP4044559 S/0096/64/000/009/0019/0022

AUTHORS: Lipshteyn, R. A. (Candidate of technical sciences); Avetisyan, A. S. (Engineer); Blagova, T. A. (Engineer); Kosobokova, E. M. (Engineer); Chuykova, T. A. (Engineer)

TITLE: On the problem of using petroleum fuel with vanadium corrosion-reducing additives in gas turbines

SOURCE: Teploenergetika, no. 9, 1964, 19-22

TOPIC TAGS: fuel additive, fuel, silicon, magnesium, calcium, zinc, vanadium, corrosion/ GTU 600 1.5 turbine, EYa 1T steel, EI 405 steel, PMS 15 polymethylsiloxane

ABSTRACT: A set of additives dissolved in fuels was tested in a model fire-test stand for the purpose of lowering vanadium corrosion. The fuels contained 0.03% V, 0.002% Na, and 0.9% S. As metallic specimens steel plates of the type EYa-1T and part of a GTU-600-1.5 turbine blade made of steel EI-405 were selected. The additives included Mg, Ca, Zn, Al, and a polymethylsiloxane (PMS-15). In all cases the ratio of metal or silicon (in the fuel) to vanadium was 3:1 (by weight). At 705C, all but the zinc naphthanate fuel showed vanadium corrosion removal. At 810C, only Mg naphthanates and polymethylsiloxane showed corrosion prevention. At 910C, only Mg naphthanate retained this ability. Magnesium additive No. 50, similar to

ACCESSION NR: AP4044559

magnesium naphthanate, showed complete corrosion removal in steels EI-405 and EYa-1T through the range 700-900C, whereas technical product No. 51 with Si:V = 2:1 content showed a similar behavior only up to 800C. The rest of the additives were less effective. Orig. art. has: 2 figures and 2 tables.

ASSOCIATION: Vsesoyuzny*y teplotekhnicheskiy institut (All-Union Heat Technology Institute)

SUBMITTED: 00 ENCL: 00

SUB CODE: PR, GC, MM NO REF SOV: 010 OTHER: 000

Card 2/2

ACCESSION NR: AP4025422 S/0096/64/000/004/0042/0044

AUTHORS: Lipshteyn, R. A. (Candidate of technical sciences); Avetisyan, A. S. (Engineer); Blagova, T. A. (Engineer); Kosobokova, E. N. (Engineer); Chuykova, T. A. (Engineer)

TITLE: The effect of the fuel ash on vanadium corrosion of metals

SOURCE: Teploenergetika, no. 4, 1964, 42-44

TOPIC TAGS: corrosion, vanadium corrosion, vanadium pentoxide, sodium sulfate, fuel, petroleum residue, fuel ash, turbine, turbine vane, steel EI-405, steel EYa-1T, diesel oil, sulfur, fuel combustion stand

ABSTRACT: The corrosive effect on samples of metals kept in ash containing vanadium pentoxide and sodium sulfate was reported on in an earlier paper by R. A. Lipshteyn, S. E. Khaykina, and E. S. Ginzburg ("Teploenergetika", No. 8, 1960). The most corrosive mixture contained a ratio 87/13 of V_2O_5/Na_2SO_4. Since the ash deposits on the vanes of GTU 600-1.5 turbines (fueled by sulfur-containing petroleum residues) consisted mainly of V_2O_5 and Na_2SO_4, the authors' intention was to

Card 1/3

ACCESSION NR: AP4025422

prove the corrosiveness of such fuels by direct experiment. They constructed a small unit provided with a spray burner, of a 2L/hr capacity, as well as with a chamber containing the metallic samples, which were exposed to the corrosive effect of the combustion gases, at a temperature range of 700-900C. The fuel used was a vanadium-free diesel oil, containing 0.9% sulfur, in which were dissolved the desired metalloorganic compounds. In the first series of experiments the ratio of V_2O_5/Na_2SO_4 varied, while keeping the total ash content of the oil constant at 0.0537%. It was found, that the corrosive aggressiveness of the fuel depended to a large extent on the temperature. Thus, at 900C the maximum corrosiveness was obtained with fuels containing 96% V_2O_5 in their ash, while at 700C the optimum corrosive concentration of V_2O_5 was 91%. In the second series of experiments the concentration of V_2O_5 in the fuel was kept constant at 0.053%, while to it were added either 0.006% Na_2SO_4 or 0.002% Pb, Cu, Ni, or Fe. It was found that the addition of Na_2SO_4 reduced somewhat the corrosiveness of vanadium, as did the addition of lead and iron. Orig. art. has: 5 charts and 2 tables.

ASSOCIATION: Vsesoyuznyy teplotekhnicheskiy institut (All-Union Thermo-technical Inst)

Card 2/3

15(0), 15(2)

AUTHOR: Chuykova, T. A.

SOV/131-58-12-8/10

TITLE: In the Works of the "Ogneupornerud" Trust (Na predpriyatiyakh tresta "Ogneupornerud")

PERIODICAL: Ogneupory, 1958, Nr 12, pp 563 - 566 (USSR)

ABSTRACT: According to a decision of the Stalinskiy sovnarkhoz, the trust was established in July 1957; it combines 5 plants for the production and processing of metallurgical limestones and dolomites, as well as 9 plants manufacturing refractories. This trust supplies the metallurgical works of the Donbass and Pridneprov'ye with fluxing agents, crude and burnt dolomite, molding sand, refractory clay and kaolin, refractories of chamotte, dinas and chromium magnesite. The output of this trust amounts quantitatively to one third of the refractories manufactured in the Soviet Union, and more than 75 % of those made in the UkrSSR. Table 1 shows the plan fulfilment of these works within six months of 1958. The production increase in the indi-

Card 1/3

vidual works within the first six months of 1958 is shown in table 2. The production increase of the individual products within the first six months of 1958 is presented in table 3. The development of the works producing refractories, which have to meet continuously increasing demand with respect to both quantity and quality, is determined by the growth and progress of the metallurgical industry. The specialization of the works manufacturing refractories is regarded as one of the most important conditions for improving quality. It is recommended that the brick-works of the Nikitovskiy dolomitnyy kombinat (Nikitovskiy Dolomite Kombinat) is taken into operation as soon as possible to safeguard a better supply of the metallurgical plants with high-quality refractories. The construction of rotary furnaces at the im. Voroshilov and im. Ordzhonikidze works is also recommended. The use of high-quality raw materials and the application of high pressure in pressing and high burning temperature are of decisive importance to an improvement

of the quality of refractories. Finally, a more extensive utilization of some mines and the increase of works are recommended. There are 3 tables.

ASSOCIATION: Trest "Ogneupornerud" ("Ogneupornerud" Trust)

LIPSHTEYN, R.A., kand. tekhn. nauk; AVETISYAN, A.S., inzh.; BLAGOVA, T.A., inzh.; KOSOBOKOVA, E.M., inzh.; CHUYKOVA, T.A., inzh.

Use of petroleum fuel in a gas turbine system and soluble admixtures for decreasing vanadium corrosion. Teploenergetika 11 no.9:19-22 S '64. (MIRA 18:8)

1. Vsesoyuznyy teplotekhnicheskiy institut.